

**EXTENDED DEVELOPMENT OF
POLYCAON STOUTII (LECONTE)
(COLEOPTERA: BOSTRICHIDAE)**

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Abstract.—*Polycaon stoutii* (LeConte) adults emerged from wood cabinets 21 to 24.5 years after they were installed in homes. The cabinets were likely white ash, *Fraxinus americana* L. This represents the first record of this bostrichid from an eastern hardwood.

Key Words.—Insecta, *Polycaon stoutii*, extended development, *Fraxinus americana*

In September 1986, a homeowner in Berkeley, California (1375 Summit Rd., Berkeley, California, Alameda Co.) contacted us after observing large black beetles emerging from ash cabinetry. Two adjacent homes with similar cabinetry were constructed by the same builder in 1967 and beetles had been observed emerging from cabinetry by homeowners of both structures. The cabinetry in one of the structures had been varnished, but the cabinetry in the second structure had been treated with linseed oil. We collected boards from the varnished cabinets, sawed them into smaller lengths, and placed them into rearing containers. We noted that all emergence tunnels were through the finished surface indicating that infested lumber was used to manufacture the cabinets. In July 1987 an adult (18 mm in length) emerged from a board in a rearing container and was identified as *Polycaon stoutii* (LeConte). A second adult of the same species, 21.5 mm in length, emerged between June 1988 and March 1991.

The black polycaon, *Polycaon stoutii*, occurs in British Columbia, the Pacific coast states, and Arizona (Ebeling 1975, Fisher 1950). It is a wood-boring insect, generally attacking non-coniferous woods used for building material, furniture, and cabinetry (Doane et al. 1936). It will also develop in the wood of fruit trees and ornamentals (Essig 1958). Normally, the larvae require one to several years to complete development (Linsley 1943b). However, Middlekauff (1974) reported three instances of extended life cycles ranging from 8 to 22 years. As is often the case with other pests associated with wood in service, this species is transported in wood products to regions where it is not indigenous [e.g., collection record from a redwood dresser in Tennessee and from a mahogany table in Texas (Fisher 1950)].

There is some question in the literature regarding the condition of the host required for oviposition by *P. stoutii*. It appears that its usual habit is to attack dead and occasionally living trees (Doane et al. 1936, Essig 1958). However, Doane et al. (1936) imply that adults are capable of ovipositing in curing plywood and lumber in warehouses. Linsley (1943b) states that *P. stoutii* is "not known to infest finished products after manufacture nor to re-infest materials in which

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it has previously been breeding"; furthermore, "emergence, even after long periods of time, is generally regarded as evidence that the product was infested before manufacture." However, Mallis (1982) states that *P. stoutii* will also attack cured hardwoods in lumber yards, buildings in mountainous areas, and furniture and other wood products (probably prior to finishing).

In this case, we consider that oviposition in the finished cabinetry from indigenous sources of beetles (e.g., firewood, moribund trees, etc.) was an unlikely source of this infestation. Besides the low probability of oviposition occurring through two different finished surfaces, individuals of this insect species were observed simultaneously emerging from cabinetry in both adjacent homes. Because the cabinets were built into the homes during construction in 1967, it is likely that both specimens developed over the 21 and 22 to 24.5-year periods, respectively.

Surprisingly, the extended developmental period in the seasoned wood did not seem to affect the vigor of the individuals that emerged. If length is taken as an indicator of health of the specimen, the lengths of the two (18 mm and 21.5 mm) are at the extreme end of the normally expected range (11 mm to 22 mm: Ebeling 1975). It is likely that development in this nutrient-poor environment was aided by microbial symbionts.

The infested wood was identified as white ash (solid), either Oregon ash, *Fraxinus latifolia* Benth, or white ash, *Fraxinus americana* L. These two species are indistinguishable based on wood anatomical characteristics. However, in contrast to *F. americana*, *F. latifolia* is rarely cut for commercial lumber. Thus, it seems probable that the infested lumber is *F. americana*. Although we have no detailed history of the origin of the lumber used to construct the cabinetry, the infestation probably was initiated in lumber after it was transported from the East to the West coast. *Fraxinus americana* is normally shipped following kiln drying to lower the moisture content thereby reducing the cost of shipment. This treatment would have killed any insects present in the raw lumber. We believe that this is the first host record for *P. stoutii* from an eastern hardwood species. Middlekauff (1974) also reported a case where *P. stoutii* was collected from "ash" cabinetry, but the species status of the wood sample was not determined.

We conclude in this instance that *P. stoutii* can undergo a greatly extended developmental cycle rivaled only by the Buprestidae (Linsley 1943a, Smith 1962) and termite queens (Krishna & Weesner 1969) and can continue its development in finished wood products (Middlekauff, 1974).

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